

an amino acid substitution of aspartic acid-12 to alanine, glutamic acid, asparagine, glutamine, lysine, arginine, serine, or threonine;

an amino acid substitution of tyrosine-15 to phenylalanine, alanine, glycine, serine, or threonine;

an amino acid substitution of tyrosine-17 to phenylalanine, alanine, glycine, glutamic acid, lysine, arginine, aspartic acid, serine, or threonine;

an amino acid substitution of histidine-35 to phenylalanine, alanine, glycine, glutamic acid, lysine, arginine, aspartic acid, tyrosine, phenylalanine, serine, or threonine;

an amino acid substitution of asparagine-38 to alanine, aspartic acid, glutamic acid, lysine or arginine; or

substitution at more than one of these amino acids; and

wherein the mutant is nonlethal compared with a wild type SPE-C toxin.

Please add and consider new claims 45-67 as follows.

45. (New) A mutant Streptococcal pyrogenic exotoxin type C (SPE-C toxin) comprising an amino acid substitution at aspartic acid-12.

46. (New) The mutant SPE-C toxin of claim 45, wherein the amino acid substitution comprises alanine for aspartic acid-12.

47. (New) A mutant Streptococcal pyrogenic exotoxin type C (SPE-C toxin) comprising an amino acid substitution at asparagine-38.

48. (New) The mutant SPE-C toxin of claim 47, wherein the amino acid substitution comprises aspartic acid for asparagine-38.

49. (New) A mutant Streptococcal pyrogenic exotoxin type C (SPE-C toxin) comprising an amino acid substitution at tyrosine-15 and at asparagine-38.

50. (New) The mutant SPE-C toxin of claim 49, wherein the amino acid substitution comprises serine or alanine for tyrosine-15 and aspartic acid for asparagine-38.

51. (New) The mutant SPE-C toxin of claim 49, wherein the amino acid substitution comprises serine for tyrosine-15 and serine for asparagine-38.

52. (New) The mutant SPE-C toxin of claim 49, further comprising an amino acid substitution at histidine-35.

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53. (New) The mutant SPE-C toxin of claim 52, wherein the amino acid substitution comprises alanine for tyrosine-15, alanine for histidine-35, and aspartic acid for asparagine-38.

54. (New) A mutant Streptococcal pyrogenic exotoxin type C (SPE-C toxin) comprising an amino acid substitution at tyrosine-17 and at asparagine-38.

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55. (New) The mutant SPE-C toxin of claim 54, wherein the amino acid substitution comprises serine or alanine for tyrosine-17 and aspartic acid for asparagine-38.

56. (New) The mutant SPE-C toxin of claim 54, wherein the amino acid substitution comprises serine for tyrosine-17 and serine for asparagine-38.

57. (New) A mutant Streptococcal pyrogenic exotoxin type C (SPE-C toxin) comprising an amino acid substitution at tyrosine-15, at histidine-35, and at asparagine-38.

58. (New) The mutant SPE-C toxin of claim 45, wherein the amino acid substitution comprises alanine for tyrosine-15, alanine for histidine-35, and aspartic acid for asparagine-38.

59. (New) A mutant Streptococcal pyrogenic exotoxin type C (SPE-C toxin) comprising an amino acid substitution at aspartic acid-12, at tyrosine-15, at tyrosine-17, at histidine-35, at asparagine-38, or at up to three of these amino acids.

60. (New) The mutant SPE-C toxin of claim 59, wherein the amino acid substitution comprises serine or alanine for tyrosine-15 and aspartic acid for asparagine-38.

61. (New) The mutant SPE-C toxin of claim 59, wherein the amino acid substitution comprises serine or alanine for tyrosine-17 and aspartic acid for asparagine-38.

62. (New) The mutant SPE-C toxin of claim 59, wherein the amino acid substitution comprises serine for tyrosine-15 and serine for asparagine-38.

63. (New) The mutant SPE-C toxin of claim 59, wherein the amino acid substitution comprises serine for tyrosine-17 and serine for asparagine-38.

64. (New) The mutant SPE-C toxin of claim 59, wherein the amino acid substitution comprises alanine for tyrosine-15.

65. (New) The mutant SPE-C toxin of claim 59, wherein the amino acid substitution comprises alanine for tyrosine-15, alanine for histidine-35, and aspartic acid for asparagine-38.

66. (New) The mutant SPE-C toxin of claim 59, wherein the amino acid substitution comprises aspartic acid for asparagine-38.

67. (New) The mutant SPE-C toxin of claim 59, wherein the amino acid substitution comprises alanine for aspartic acid-12.